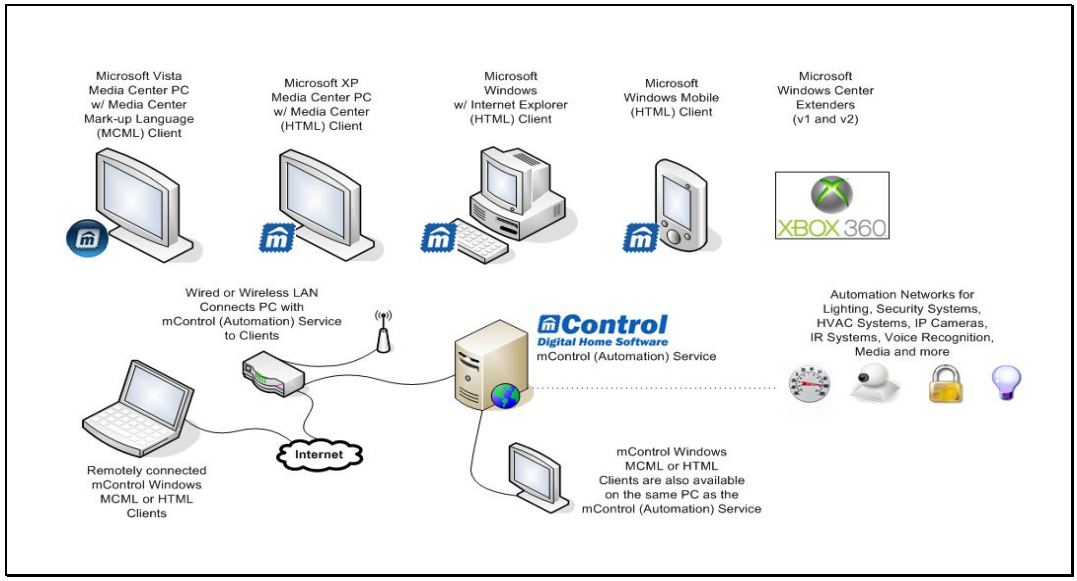
Supported Platforms

	Supported Windows Platforms Summary
	▪ Windows Vista (x86,x64) ▪ Windows Home Server ▪ Windows XP Editions - Home, Pro, Media Center Edition 2005 ▪ Windows 2003 Server ▪ Windows 2000 ▪ Windows XP Embedded **All platforms require .NET Framework v2.0** ***mControl user interface client for Vista Media Center is currently not supported on the Vista x64 platform***

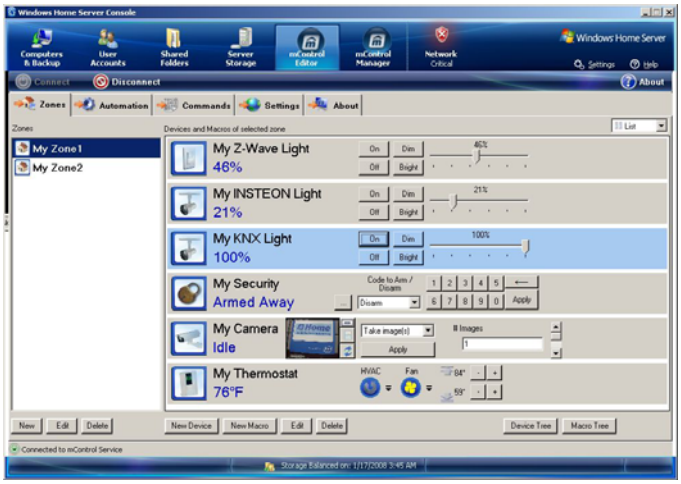

Microsoft Vista Media Center PC w/ Media Center Mark-up Language (MCML) Client
Microsoft XP Media Center PC w/ Media Center (HTML) Client
Microsoft Windows w/ Internet Explorer (HTML) Client
Microsoft Windows Mobile (HTML) Client
Microsoft Windows Center Extenders (v1 and v2)
XBOX 360
Wired or Wireless LAN Connects PC with mControl (Automation) Service to Clients
mControl
Digital Home Software
mControl (Automation) Service
Automation Networks for Lighting, Security Systems, HVAC Systems, IP Cameras, IR Systems, Voice Recognition, Media and more
Internet
Remotely connected mControl Windows MCML or HTML Clients
mControl Windows MCML or HTML Clients are also available on the same PC as the mControl (Automation) Service

mControl provides a client/server architecture

Multi-Language Support			
	▪ Arabic	▪ Chinese (Simple)	▪ Chinese (Traditional)
	▪ Dutch	▪ English	▪ French (Canada)
	▪ French (France)	▪ German	▪ Italian
	▪ Portuguese	▪ Spanish	

User Interfaces

- **Supports multiple client user interfaces**
- **Real-time device status information updates**
- **Television and remote control operation using Media Center or Beyond Media**
- **Touch screen operation using Media Center, Beyond Media or full-screen Internet Explorer**

User Interface	Screenshot & Features
mControl for Vista Media Center	 ▪ Works with Windows Vista Media Center ▪ Provides high-fidelity graphical user interface based on Windows Vista's native graphical language (MCML) ▪ Available through "More Programs" area – with instructions on how to install on Media Center's main menu ▪ Works with all Media Center Extenders including XBox 360 and other 2nd generation extenders (e.g., Linksys 2100/2200)
mControl Editor	 ▪ mControl Editor utility allows for drag-and-drop configuration ➢ Manage zones, devices and automation ➢ Manage IR and external commands ➢ Configure system settings and manage licenses

mControl for Internet Explorer, MCE 2005 and SnapStream	 ▪ Works with Internet Explorer 6.0 and Internet Explorer 7.0 ➢ Local machine or via remote networked access ➢ Automatically recognizes and supports *Ultra Mobile PC* (UMPC) browsers (e.g., Samsung Q1) ➢ Multiple skins provided – with instructions on how to generate custom skins ▪ Works with Windows XP Media Center Edition 2005 ➢ Available through "More Programs" area – with instructions on how to install on Media Center's main menu ➢ Works with all Media Center Extenders including XBox 360 ▪ Works with SnapStream's Beyond Media
mControl for Windows Mobile and iPhone/iTouch	 ▪ Works with Windows Mobile Smartphones and Pocket PCs ▪ Works with iPhone/iTouch ▪ Display and control devices and macros
mControl for Windows Sideshow	▪ Works with Windows Sideshow auxiliary display devices including Sideshow-enabled remote controls ▪ Display and control devices and macros

mControl
Digital Home Software

Zone and Device Management

- **Associate names and images for each device – add custom images**
- **Create named zones for organizing devices - each zone can contain one or many devices**
- **Specify the display order of zones, devices and macros**

Macro Automation

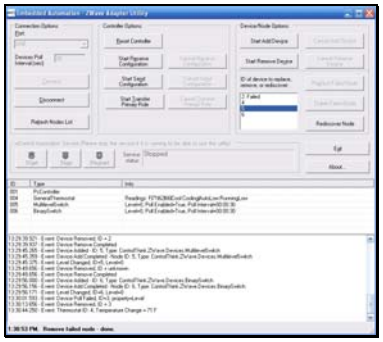
- **Create and modify macros from within mControl user interface – no special configuration utility required**
- **Each macro can have one or more triggers – or be initiated manually**
- **Each trigger can have one or more conditions**
- **Once activated, a macro will execute its set of actions sequentially**
- **Ability to manually run, pause and stop macros**

	Macro Automation Summary
Trigger Conditions	▪ Device event – based on a state change ➢ Lighting devices – on/off (all devices), level (dimmable devices only), incoming group command ➢ Security systems – armed states, zone states and alarms ➢ HVAC systems – operation modes, fan modes, temperature ➢ Camera systems – motion ▪ Device status – based on the current state ▪ IR event – based on receipt of a previously taught IR command ▪ MCE event – based on receipt of a Media Center event ➢ Media Type – DVD, CD, Recorded TV, Audio, Video, Live TV or Any ➢ Action – Play, Pause, Stop ➢ PC Name – specific PC (IP address or name) ▪ One Time event – based on a specific time (once only) ▪ Time of Day event – based on a specific time each day ➢ Options – month/day, days of the week, randomness (in minutes) ▪ Recurring Timer – allows for repeated triggering within a time duration ▪ Time Range – allows for macro operations within two time periods ▪ Sunrise/Sunset – based on a sunrise/sunset time as calculated based on stored longitude/latitude ➢ Options – days of the week, randomness (in minutes), offset (+/- minutes)
Macro Actions	▪ Device action – changes the state of a device ➢ Lighting devices – on, off, on with specified brightness ➢ Security – run on-board function/task ➢ Climate systems – set mode, fan or set points ➢ Camera systems – record video with specified frame rate and duration or take specified number of snapshots over a duration ➢ Irrigation systems – start a specified valve or initiate a program ▪ Delay action – adds a time-based delay between actions ➢ Options – hours, minutes, seconds, randomness (in minutes) ▪ IR action – sends an IR command ➢ Options – blaster address, repeat count ▪ Macro action – launches another macro (for use as subroutines) ▪ Send Mail action – sends an email with macro name ▪ Run Application action – runs an external application with parameters

Lighting and Control Systems

- **View and adjust device information manually or within macros**

	Lighting and Control System Summary
INSTEON COMPATIBLE	▪ *Adapters: 2414 (USB, Serial), 2412 (USB, Serial), 2814 (USB), SimpleHomeNet EZBridge (IP), Universal Devices ISY-xx* ▪ Supports entire range of INSTEON dimmer and relay switches, lamp modules and appliance modules ▪ Supports 2-way operation for control and status updates ▪ Configurable preset dim and ramp rates ▪ Supports manual paddle/keypad press initiated macro triggers
Z-Wave the wireless language	▪ *Adapters: ACT HomePro ZCxxxx (USB + Serial, NA + EU), Intermatic HA22 (USB), ControlThink ThinkStick, Wayne Dalton, Cooper Wiring, TrickleStar and other Z-Wave compatible adapters* ▪ Convenient Z-Wave Adapter Utility allows simplified management of controllers and devices ➢ Primary and secondary controller role management ➢ Transfer Z-Wave network information ➢ Add, remove, rediscover and replace devices ▪ Supports entire range of Z-Wave binary switches, multi-level switches, thermostats, shades, lamp modules and appliance modules ▪ Supports 2-way operation for control and status updates ▪ Supports manual paddle press initiated macros
rako	▪ *Adapters: RAV232+ Bi-Directional RS232-RF Interface* ▪ Supports broad range of Rako devices
X10	▪ *Adapters: 2414U (USB, Serial), 1132CU (USB), CM11A (Serial), CM12U (Serial), CM15A (USB), CM17A (Serial), CM19A (USB), W800RF32A (Serial)* ▪ Supports entire range of X10 dimmer and relay switches, universal modules, motion detectors, lamp modules and appliance modules ▪ Supports 2-way operation for control and status updates (for X10 devices which support extended X10 messaging – including Leviton dimmer switches) ▪ Supports motion detector and other incoming X10 signals for starting macros



The Z-Wave Adapter Utility allows for easy network, controller and device management

Trigger macros based on an INSTEON KeypadLinc button press

Security Systems

- **View current area information including arm/disarm status**
- **View current zone information including violations**
- **Arm and disarm areas**
- **Initiate macros on security system changes including on area alarms or change in arm/disarm status**

Security Systems	Supported Platforms	Interface
DSC Security Products	PowerSeries PC1616, PC1832 and PC1864	PC5401 Data Interface (RS-232) or IT-100 Integration Module (RS-232)
ELK PRODUCTS, INC.	M1 Gold	RS-232 serial or IP connection
Honeywell	ADEMCO VISTA-128BP and VISTA-250BP	RS-232 serial via 4100SM Serial Interface Module

Trigger macros based on a Security System event

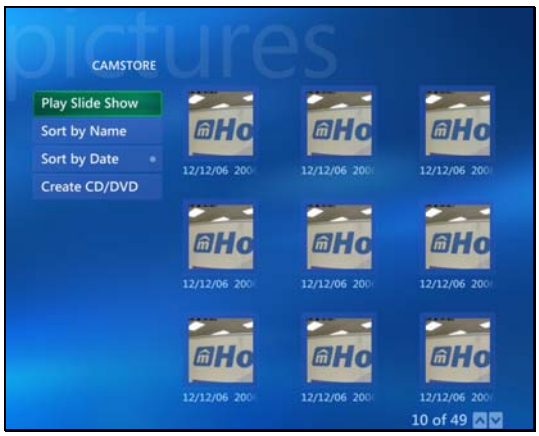
Access and control your Security System

Camera Systems

- **View live video from cameras – at up to 30 frames per second (fps) on Vista Media Center and mControl Editor**
- **Pan-tilt-zoom functionality (if supported by camera)**
- **Trigger macros based on camera-detected motion**
- **Record video and snapshots manually or within macros**
- **View recorded video and snapshots**
- **On Media Center systems, view recorded video and snapshots within "My Videos" and "My Pictures" area**
- **Ability to add other (CGI controlled or ActiveX-based) IP camera systems**

Camera Systems	Supported Platforms	Interface
AXIS COMMUNICATIONS	206, 206M, 206W, 207, 207W, 210, 210A, 211, 212PTZ, 213PTZ, 214PTZ, 221, 225FD and analog camera hubs/servers	IP interface
LINKSYS A Division of Cisco Systems, Inc.	WVC54GCA, WVC200	IP interface
Panasonic ideas for life	BB-HCM311,331,371,381, 511,515,531, 580, 581 BB-HCS301 BL-C10, 30, 111, 131 KX-HCM8, 10, 110, 230, 250, 270, 280, 280A	IP interface
D-Link	DCS-900, DCS-900W, DCS-2100+, DCS-3220/6620, DCS-5300W	IP interface

View live video and operate camera systems



View camera snapshots within Media Center's "My Pictures" section

Climate Control Systems

- **View current temperature, climate control mode and fan settings information**
- **Adjust climate control mode, mode set points and fan settings manually or within macros**

Climate Systems	Supported Platforms	Interface
	Proliphix NT Basic series thermostats (NT10e, NT20e)	IP
Aprilaire	Aprilaire Communicating Thermostats (8870)	RS-232 serial (or via ELK-M1)
HAI	Omnistat RC series thermostats	RS-232 serial (or via ELK-M1)
RCS	TXB16 (X10) thermostat	X10
RCS	TZ16 (X10) thermostat	Z-Wave

Access and control your HVAC System

mControl
Digital Home Software

Control of Audio/Visual Components

- **Control audio/visual components via IR or through serial or IP connection**
- **Control one or more audio/visual components through mControl automation macros**

Supported Platforms	Adapter Interface	Control Capability
mControl Vista Media Center Controller Adapter	IP interface	▪ Send/receive commands via IP connection to control Vista Media Centers and attached Extenders
mControl Generic Adapter	RS-232 Serial or IP interface	▪ Use existing or create your own command list for a serial- or IP-controllable audio/visual component ▪ Send commands via serial or IP connection within an mControl macro to control the audio/visual component
Global Caché GC-100 Network Adapter	IP interface	▪ Learn or copy/paste IR commands in CCF format ▪ Send IR commands manually or within macro actions ▪ Trigger macros based on recognition of an incoming IR command
USB UIRT IR adapter	USB	▪ Learn or copy/paste IR commands in CCF format ▪ Send IR commands manually or within macro actions ▪ Trigger macros based on recognition of an incoming IR command
CasaTools™ smart solutions for smart homes	IP	▪ Direct interface to CasaTools software, which allows for control of NuVo, Russound and other whole home audio systems

Start mControl macros using your remote control

Irrigation Systems

- **View valve and program status information**
- **Adjust valve and program settings**
- **Start single valve or program operation manually or within a macro**

Irrigation Systems	Supported Platforms	Interface
Simplehomenet	EZRain V1 Irrigation Controller	INSTEON

Start a sprinkler program as part of a time-based macro

Voice Control Systems

- **Control devices and initiate macros using voice control**

Voice Control	Supported Platforms
	One Voice Technology's Media Center Communicator
	Microsoft Text-to-Speech

Run an mControl macro by a voice command

Add-Ins for Advanced Automation (3rd Party)

Automation System	Supplier	Capabilities
KNX (ISO/IEC 14543-3)	Tekniska Byrån	▪ Lighting, window shade, climate and media control ▪ mControl macro triggers and actions
LiteTouch 5000LC LiteTouch Brilliant Solutions in Lighting Automation	InSite Technologies	▪ Lighting and window shade control ▪ mControl macro triggers and actions
UPB UPB™ UNIVERSAL POWERLINE BUS	Tom Boyce	▪ Lighting control ▪ mControl macro triggers and actions
Media Center Controller	VidaBox and Kindel.com	▪ Control Media Center operation within mControl macros
Colorado vNet Driver Colorado vNet	Colorado vNet	▪ Lighting and window shade control ▪ mControl macro triggers and actions
NuVo Concerto NUVO TECHNOLOGIES	VidaBox	▪ Whole Home Audio control

Additional Drivers by Embedded Automation: Lighting Control

Automation System	Supplier	Capabilities
Universal Devices	Embedded Automation	▪ Support for ISY-xx family of controllers ▪ Lighting, HVAC and general automation ▪ mControl macro triggers and actions
CentraLite (JetStream & StarLite)	Embedded Automation	▪ Lighting control ▪ mControl macro triggers and actions
Echelon LonWorks	Embedded Automation	▪ Lighting control ▪ mControl macro triggers and actions
Lutron Grafik Eye	Embedded Automation	▪ Lighting and window shade control ▪ mControl macro triggers and actions
Lutron RadioRA	Embedded Automation	▪ Lighting control ▪ mControl macro triggers and actions
Mi Casa Verde	Embedded Automation	▪ Lighting, thermostat and sensor ▪ mControl macro triggers and actions

Additional Drivers by Embedded Automation: mPanel Control

Embedded Automation	Embedded Automation	▪ Control mPanel touch panels from within mControl software

Additional Drivers by Embedded Automation: Security and HVAC

In2 Networks Modules	Embedded Automation	▪ Energy ICM – Honeywell FocusPRO and VisionPRO IAQ thermostats ▪ Security ICM – Honeywell Vista security systems

Additional Drivers by Embedded Automation: Audio and I/O Control

Home Automation Control Systems (HACS)	Embedded Automation	▪ Speaker switchbox controller
Bitwise Controls	Embedded Automation	▪ IP-based modules for serial communications, configurable GPIO, relays and IR control
Beckhoff Control Systems	Embedded Automation	▪ ADS.NET interface to allow real-time management of Beckhoff I/O control systems

Additional Drivers by Embedded Automation: Power Management

Automation System	Supplier	Capabilities
The Energy Detective (T.E.D.)	Embedded Automation	▪ Real-time display of power usage ▪ Trigger macros based on power consumption

Use Real-Time Power Management Information to Help Manage Costs

Other Add-Ins (Embedded Automation's Forum Community)

Automation System	Supplier	Add-in Description
Weather Underground	Forum User: ***scruzphreak***	▪ Provides interface to http://www.wunderground.com/ service ▪ Provides real-time weather related status and macro control

Other IP Cameras (Embedded Automation's Forum Community)

Manufacturer	Camera	Camera Model
Airlink101		▪ SkyIPCam500W Wireless Night Vision Network Camera
		▪ SkyIPCam747W Wireless Night Vision Pan/Tilt Network Camera
AVIOSYS		▪ 91xx (4-port video analog) camera hub
Trendnet		▪ TV-IP201W
		▪ TV-IP400W (Pan-Tilt-Zoom)
Y-Cam		▪ Y-cam Knight ▪ Y-cam Black/White

mControl Utilities

mControl Utilities	Summary
mControl Editor	▪ Spreadsheet-based configuration of zones, devices and macros
Z-Wave Adapter Utility	▪ Allows management of the Z-Wave network, controllers and devices
mControl Service Manager	▪ Controls operation of mControl's Automation Service
mControl SDK	▪ Software Development Kit (SDK)
mControl DDK	▪ Driver Development Kit (DDK)

Awards

- 1st Place for ***Best Commercial Application for Windows Media Center*** as awarded by the Media Center Podcast 2006
- Runner-up for ***Best Commercial Application for Windows Media Center*** as awarded by the Media Center Podcast 2007

mControl Support

mControl Support	Summary
mControl User Manual	▪ Comprehensive manual provides detailed instructions on mControl configuration and operation
Diagnostic Page	▪ Go to: http://mControlServerIP:29990/diagnostic.aspx
mControl Support	▪ Email support@embeddedautomation.com for direct support help
mControl Forum	▪ Visit http://www.embeddedautomation.com/forum for community-based help
mControl Log File	▪ Summary of all mControl activity with configurable verbosity

Where to Purchase

	Supplier	Summary
	www.embeddedautomation.com	▪ General or dealer inquiries
SMARTHOME	www.smarthome.com	▪ General or dealer inquiries (USD$)
AARTECH	http://www.aartech.ca	▪ Canadian orders (CDN$)
smarthome	http://www.smarthome.com.au	▪ Australia, New Zealand and Asia (AU$)
aura digital living	http://aura-digitalliving.com	▪ United Kingdom
domVision	http://www.domvision.com	▪ Benelux countries
DOMADOO	http://www.domadoo.fr	▪ France
Home Control	http://www.homecontrol.ie	▪ Ireland, Dubai
NEUTRON	http://neutron.ca/	▪ Canada (Installer)

Revisions

Date	Version	Revision
July 7, 2008	mControl v2.1	▪ Added CentraLite, UPB support ▪ Supported Z-Wave adapter ▪ Other add-ins supported by user community
October 7, 2008	mControl v2.1 RCGOLD3 B1	▪ Vista x64 support – except for Vista Media Center ▪ Power Management Module ▪ Text to speech driver ▪ Bitwise Controls driver ▪ In2Networks driver ▪ Beckhoff ADS driver ▪ IP cameras supported by Embedded Automation forum community
January 16, 2009	mControl v2.1 RCGOLD3 B3	▪ HACS AB8SS driver ▪ Universal Devices ISY-xx driver ▪ Mi Casa Verde Vera driver ▪ Embedded Automation mPanel driver